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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/081,521	FLANIGAN, V. J.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Alexis Wachtel	1764	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to response filed 11-10-05.
2. ☒ The allowed claim(s) is/are 19-22 and 26-35.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
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***Detailed Action***

***Examiner's Amendment***

On 1<sup>st</sup> page of Specification, immediately after title insert: US 10/081521 is a division of US 09/027642 02/23/1998 now US 6372949, which is a continuation of US 08/345115 11/28/1994 now US 5783046.

***Allowable Subject Matter***

1. The following is an examiner's statement of reasons for allowance:

With respect to claims 21,22,34,35, the closest prior art to Jarrell teaches the claimed apparatus except for the use of means for monitoring the weight loss of a material to be pyrolyzed. US 5081046 to Schneider is directed to methods of determining the binder content of bituminous building materials, and to that effect uses an apparatus illustrated in (Fig.3). A scale (17) is used to monitor the weight loss of samples. It is important to note that the scale is used merely for determining experimentally the weight loss of material for the purpose of characterizing the binder content of bituminous building materials. Conversely, the apparatus disclosed by Jarrell operates on an industrial scale. It would not have been obvious to have used the weight loss monitoring means as claimed in conjunction with the apparatus disclosed by Jarrell

With respect to claims 19 and 21, the closest prior art to Jarrell discloses the claimed apparatus except for a circulation loop for circulating a heat transfer gas from a first reactor (corresponding the claimed first distillation chamber), through a second reactor (corresponding to a claimed second distillation chamber) and back into said first reactor (corresponding to a claimed first distillation chamber) such that the heat transfer gas contacts solid carbonaceous char in said second reactor (corresponding to a claimed second distillation chamber), heat being transferred from the carbonaceous char to the heat transfer gas in said first reactor (corresponding to a claimed first distillation chamber) to cool the char, and heat being transferred from the heat to said rubber charge in said second reactor (corresponding to a claimed second distillation chamber) to preheat the rubber charge. At best, Jarrell discloses the use of a pressure equalization line (21). During the heating of a first reactor (reads on distillation chamber)

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this pressure equalization line (21) is shutoff by valve (21a). When heating has stopped in a first reactor, the pressure of a second reactor is drawn to approximately 457mm Hg, resulting in an internal pressure of 303 Hg absolute. Valve (21a) in the pressure equalization line is then opened so that the heat passes from the first reactor to the second reactor and the temperature of the first reactor cools, while the temperature of the second reactor warms up (Col 8, lines 8-22). In view of this disclosure, it would not have been obvious to have provided the apparatus of Jarrell with a circulation loop as claimed since Jarrell employs a pressure equalization means whose operation would be negatively impacted without extensive and non-obvious reactor redesign if a circulation loop as claimed is integrated with the reactors. Claims 26-29 depend on claim 19. Claims 30-33 depend on claim 20.

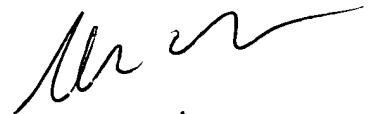
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Wachtel whose telephone number is 571-272-1455. The examiner can normally be reached on 10:30am to 6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Glenn Caldarola, can be reached at (571)-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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